

CLAIMS

1. A tool for cutting tissue comprising:

a body, the body having a drive rod constructed and arranged for longitudinal movement therethrough;

5 a handle lever being operatively engaged to the drive rod, such that when the handle lever is moved between a first position and a second position the drive rod is moved between an advanced position and a retracted position, the drive rod extending from a proximal end of the body to a distal end; and

a cutter beam, cutter beam being pivotally engaged to the distal end of the
10 body, the cutter beam being pivotally moveable between a non-actuated position and an actuated position, a lower pivot member pivotally connects the distal end of the body and the cutter beam, the cutter beam being further pivotally engaged to a distal end of the drive rod, whereby when the drive rod is moved to the advanced position the cutter beam is pivoted about the lower pivot member to the actuated position and when the drive rod is moved to
15 the retracted position the cutter beam is pivoted back to the non-actuated position.

2. The tool of claim 1 wherein the handle lever is engaged to the drive rod in a rack and pinion arrangement.

20 3. The tool of claim 2 wherein the drive rod comprises a rack and the handle lever comprises a pinion.

4. The tool of claim 1 further comprising a linkage assembly, the linkage assembly having a first end and a second end, the first end being pivotally engaged to the distal end of
25 the drive rod by a first pivot member, the second end pivotally engaged to the cutter beam by a second pivot member.

5. The tool of claim 1 further comprising a return mechanism, the return mechanism constructed and arranged to exert a predetermined force on the drive shaft, the predetermined force being sufficient to return the drive shaft to the retracted position when an outside force is not engaging the handle lever.

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6. The tool of claim 5 wherein the return mechanism comprises:

a shoulder bolt, the shoulder bolt having a bolt shaft and an end portion, the shoulder bolt being at least partially contained within the body, a biasing member is disposed about at least a portion of the bolt shaft, the bolt shaft being engaged to a proximal end of the drive shaft, the end portion sized to retain the biasing member about the bolt shaft, the bolt shaft passing through a return member, the return member being engaged to the body, the return member constructed and arranged to prevent passage of the biasing member therethrough but to allow the bolt shaft to pass therethrough.

15 7. The tool of claim 1 wherein the cutter beam includes at least one cutting edge, the at least one cutting edge being positioned to cuttingly engage surrounding tissue when the cutter is moved into the actuated position.

8. The tool of claim 7 wherein the at least one cutting edge is positioned to cuttingly engage the surrounding tissue when the cutter is moved from the actuated position to the non-actuated position.

9. The tool of claim 7 wherein the at least one cutting edge is straight.

25 10. The tool of claim 7 wherein the at least one cutting edge is curved.

11. The tool of claim 7 wherein the at least one cutting edge is U-shaped.

12. The tool of claim 7 wherein the at least one cutting edge is serrated.

13. The tool of claim 7 wherein the at least one cutting edge further comprises a first cutting edge and a second cutting edge, the first cutting and the second cutting edge being
5 opposably mounted on the cutter.

14. The tool of claim 14 wherein the first cutting edge is positioned on a front side of the cutter and the second cutting edge is positioned on a back side of the cutter.

10 15. A method of cutting tissue comprising the following steps:

a) providing a resecting reamer tool, the tool comprising:

a body, the body having a drive rod constructed and arranged for longitudinal movement therethrough;

a handle lever being operatively engaged to the drive rod, such that when the
15 handle lever is moved between a first position and a second position the drive rod is moved between an advanced position and a retracted position, the drive rod extending from a proximal end of the body to a distal end;

a cutter beam, cutter beam being pivotally engaged to the distal end of the body, the cutter beam being pivotally moveable between a non-actuated position and an
20 actuated position, a lower pivot member pivotally connects the distal end of the body and the cutter beam, the cutter beam being further pivotally engaged to a distal end of the drive rod, whereby when the drive rod is moved to the advanced position the cutter beam is pivoted about the lower pivot member to an actuated position and when the drive rod is moved to the retracted position the cutter beam is pivoted back to the non-actuated position;

25 b) providing an opening into a spinal disk;

c) placing the distal end of the body into the opening;

d) orienting the tool such that the cutter beam oriented in a substantially parallel manner to a transverse plane of the disc;

e) applying a manual compression force to the handle lever, thereby moving the

handle from the first position to the second position, the drive rod from the retracted position to the advanced position and the cutter beam from the non-actuated position to the actuated position;

- f) cutting any tissue which is engaged by the cutter beam;
- 5 g) removing the manual compressive force from the handle lever; and
- h) returning the handle from the second position to the first position, thereby moving the drive rod from the advanced position to the retracted position and moving the cutter beam from the actuated position to the non-actuated position.

10 16. The method of claim 15 wherein steps e) through h) are repeated until a desired amount of tissue is removed from the spinal disk.

17. A tool for cutting tissue comprising a housing, a shaft, a beam, and an activation member

15 the housing being at least partially disposed about the shaft, the shaft constructed and arranged to moved proximally and distally within the housing;

the beam being pivotally engaged to a distal end of the shaft, the beam constructed and arranged to be rotated about a pivot member engaged to the distal end of the shaft and the beam, the beam having at least two cutting blades, each cutting blade being

20 positioned at opposite ends of the beam; and

the activation member being operatively engaged to the proximal end of the shaft, when the activation member is placed in an activated position the shaft is moved distally relative to the housing thereby pivoting the beam in a predetermined arc about the pivot member.

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